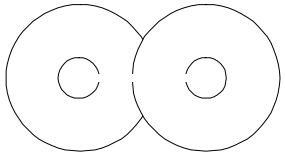

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Electronic Forms in the Social Security Administration Certificates of U.S. Coverage Pilot

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Technology Solutions for Government and Business

Agenda

- **Introduction**
- **Business Need**
- **Possibilities Explored**
- **Current Design**
- **Questions**

Introduction

- **The Social Security Administration (SSA) is very interested in providing services on the Internet**
  - Reduced Costs
  - Convenience for Users
  - Government Paperwork Elimination Act (GPEA)
  - "Keeping the Promise" SSA Strategic Plan (http://www.ssa.gov/asp/)

- **Services provided by SSA must be secure**
  - PEBES Report (http://www.ssa.gov/reports/service/)

Business Need

- **Certificate of U.S. Coverage (COC)**
  - Agreement with 17 nations
  - Residents working abroad only pay social security to the nation of their citizenship
  - Forms contain sensitive information
  - Currently available in two forms: paper and electronic
    - Paper application signed by a company representative of the individual working abroad
    - Electronic (Internet) application currently does not use any digital signature or other authentication

Business Need (cont.)

- **A good choice for a pilot Internet application**
  - Relatively small number of users
  - SSA has a pre-existing relationship with potential users
  - Potential users already using the electronic (Internet) application, and prefer it to the paper process

Business Need (cont.)

- **Process**
  - Forms filled out and digitally signed by corporate representative
  - Forms encrypted and sent securely to SSA for processing
  - SSA verifies digital signature
  - If verified, extract data from form to be entered in SSA private network
  - Send confirmation message to corporate representative

Business Need (cont.)

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Business Need (cont.)

- **Realized PKI would be key technology**
  - Purchased Verisign OnSite for pilot
- **Other operational concerns**
  - Existing network infrastructure
  - Firewalls/Proxy servers
  - Client / Server platforms

Possibilities Explored

- **Explored different choices for implementing electronic forms**
  - Custom Software
    - HTML forms
    - Java Applet
  - Commercial off-the-shelf (COTS)
    - JetForm FormFlow
    - UWI InternetForms

Possibilities Explored (cont.)

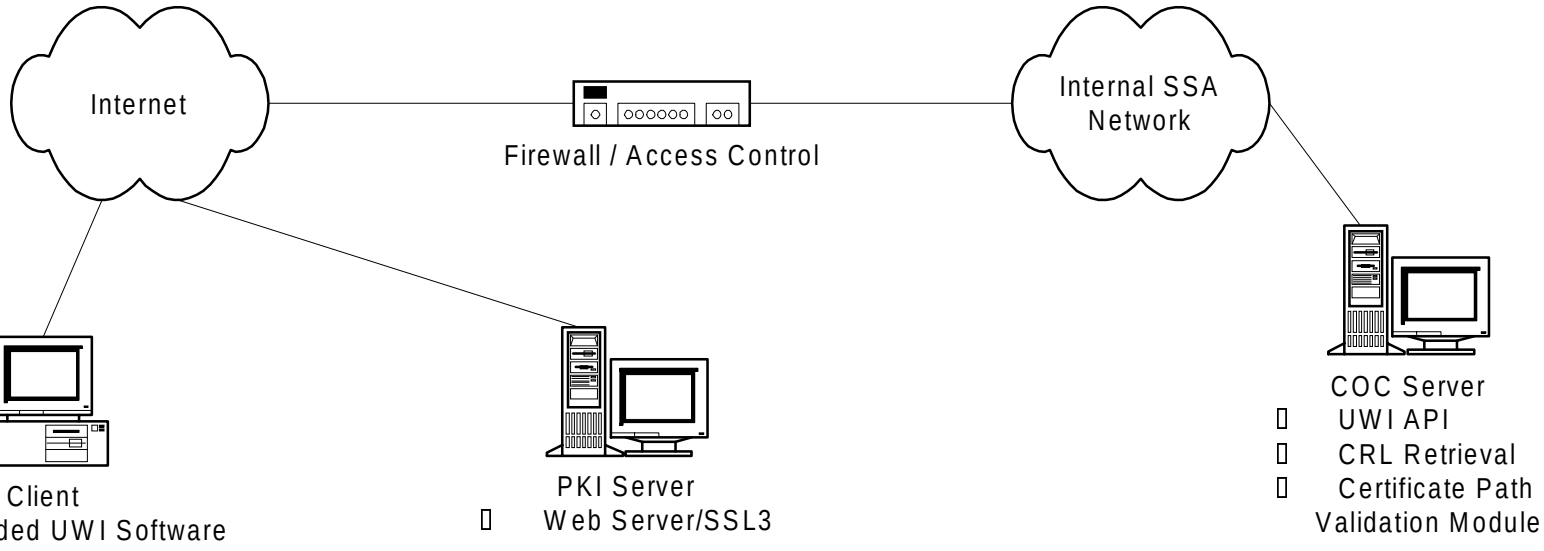
- **Determined that COTS would be a lower cost long-term solution**
- **Matched two COTS products against each other**
  - Chose UWI InternetForms for
    - UNIX API
    - Microsoft/Netscape compatibility
    - Built-in signing/verifying capability*
    - Extension interface

* Not available out-of-box on UNIX platform

Current Design

- **Client**
  - Web browser with Verisign Certificate
  - Enhanced UWI plug-in for encrypting signed forms
- **PKI Server**
  - Web server requiring SSLv3 authenticated connection
  - Stores encrypted/signed forms
- **COC Server**
  - Retrieves encrypted/signed forms from PKI server
  - Decrypts/verifies/processes form data

Current Design (cont.)



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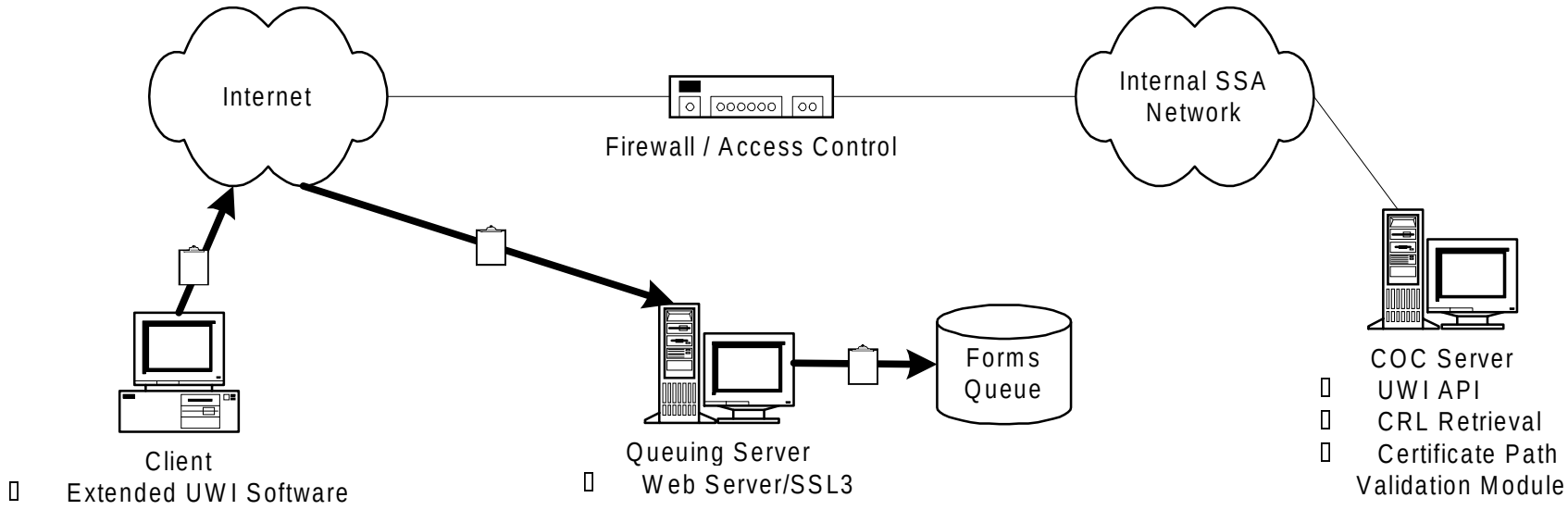
Current Design (cont.)
Client sends form to PKI Server



Form is filled, signed, encrypted, and sent to PKI Server to be stored in a FIFO queue

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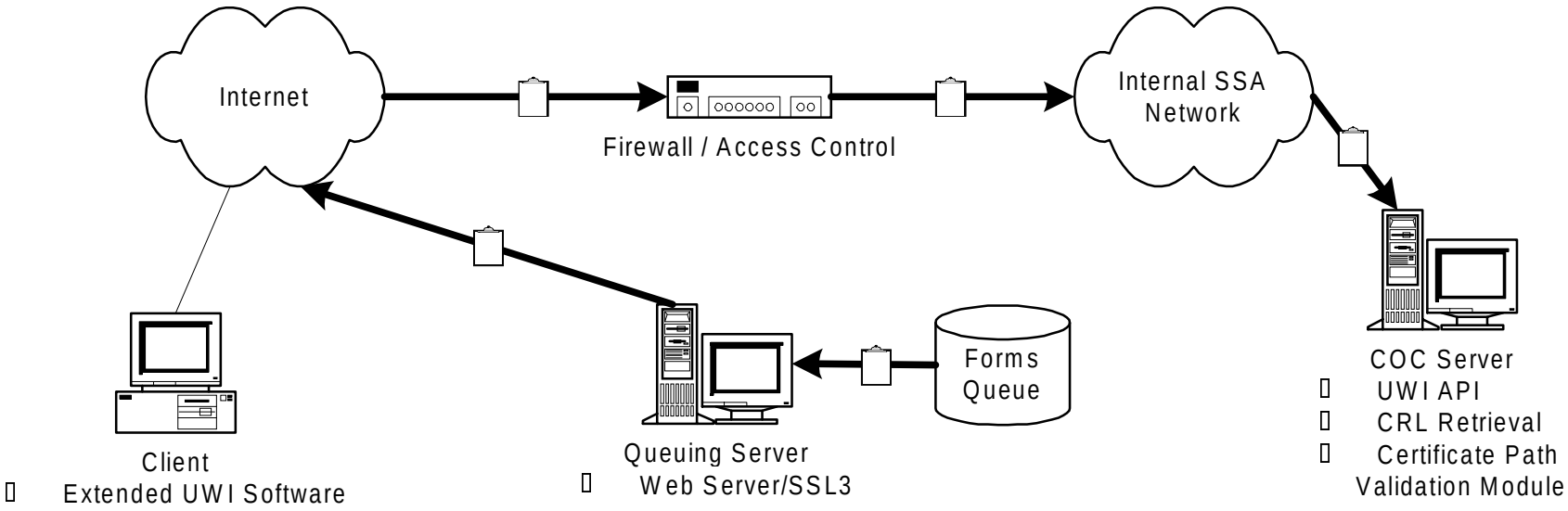
Current Design (cont.)
COC Server retrieves form from Queue



Form is retrieved from Queuing Server's queue, decrypted, verified, and processed

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Current Design (cont.)

- **Uses electronic forms package to**
  - Recreate form look-and-feel
  - Perform digital signature
  - Build workflow intelligence into form
- **Uses electronic forms API to**
  - Retrieve information from form
  - Verify digital signature*
  - Extend form capabilities

* Not available out-of-box on UNIX platform

Questions